

What is claimed is:

1        1.    An  $\text{Nb}_3\text{Sn}$ -based superconductive wire comprising a  
2    bronze/filament aggregate obtained by placing a lot of niobium  
3    (Nb) or niobium alloy filaments in a copper (Cu)-tin (Sn)-based  
4    alloy matrix,

5        wherein said niobium or niobium alloy filament constituting  
6    said bronze/filament aggregate is a composite filament obtained  
7    by combining with a filament reinforcing material having  
8    mechanical strength under temperature not more than room  
9    temperature after thermal treatment for producing an  $\text{Nb}_3\text{Sn}$ -based  
10   superconductive compound, larger than the mechanical strength  
11   of said niobium or niobium alloy.

1        2.    The  $\text{Nb}_3\text{Sn}$ -based superconductive wire according to Claim  
2    1 wherein said filament reinforcing material is composed of a  
3    niobium alloy, tantalum (Ta), tantalum alloy, tungsten (W),  
4    tungsten alloy, titanium (Ti), titanium alloy, molybdenum (Mo),  
5    molybdenum alloy, vanadium (V), vanadium alloy, zirconium (Zr),  
6    zirconium alloy, hafnium (Hf) or hafnium alloy.

1        3.    The  $\text{Nb}_3\text{Sn}$ -based superconductive wire according to Claim  
2    1 wherein said composite filament comprises said filament  
3    reinforcing material in volume fraction of 0.05 to 0.65 in the  
4    composite filament.

1        4.    The Nb<sub>3</sub>Sn-based superconductive wire according to Claim  
2    1 wherein said composite filament has a diameter of 15 μm or  
3    less.

1        5.    The Nb<sub>3</sub>Sn-based superconductive wire according to Claim  
2    1 wherein the volume ratio of the niobium or niobium alloy forming  
3    said composite filament to the copper-tin-based alloy matrix  
4    is 0.8 or more and 2.5 or less and the volume ratio of the composite  
5    filament to the copper-tin-based alloy matrix is 0.3 or more.

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